

REMARKS

Claims 1 to 35, as amended, are pending in this application. Claims 1 to 12, 15, 17 to 20, 26 and 28 have been amended. Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached page is captioned “**Version with markings to show changes made.**” The amendments clarify the scope of the claims or correct typographical errors, but add no new matter and find full support in the original specification, claims and drawings. In view of the above amendments and following remarks, Applicants request reconsideration and a timely indication of allowance.

The Examiner has objected to the drawings because reference numerals 30a, 30b, 37' and 39 were mentioned in the description, but were not included in the drawings. The drawings have been amended to include these missing reference numerals.

The Examiner also objected to the drawings because reference numeral 91 was included in the drawings, but was not mentioned in the description. The drawings have been amended to remove reference numeral 91.

The Examiner objected to claims 2 to 11 and 17 to 19 because of certain informalities. The claims have been amended so as to comply with the Examiner's requests and are in condition for allowance.

The Examiner rejected claims 28 and 33 to 35 as being anticipated by Hillhouse (US 4,212,263). Independent claim 28 has been amended to more clearly articulate a “means using *pulses of gas* for directing slip sheets from a handling area to the means for holding” (emphasis added). Hillhouse is directed to a printing plate processing machine. More particularly, Hillhouse teaches a blower which discharges air streams to keep a baffle open and to urge slipsheets through the passage entrance. However, Hillhouse does not teach or suggest using pulses of gas for directing slips sheets. Due to the structure taught in Hillhouse, using pulses of gas would cause the baffle to swing open and closed and would interfere with the slipsheets moving into the passage entrance. Accordingly, it could not operate with pulses of gas. Thus, claim 28, and claims 33 to 35 which depend therefrom, are allowable over Hillhouse.

The Examiner rejected claims 1 to 6, 10 to 13 and 29 to 30 as being allegedly unpatentable over Hillhouse in view of Angelbeck et al. (US 4,667,948). Independent claim 1 has been amended to recite

a method of “directing *pulses* of gas at the slip sheet to blow the slip sheet into a discarded slip sheet area” (emphasis added). Independent claims 12 and 28 both contain a similar limitation. As discussed above, Hillhouse does not disclose or suggest using pulses of gas for directing slipsheets. Angelbeck, on the other hand, teaches that an air stream “penetrates from the end face of the plate stack between the plates lying at the top” which isolates the plates from an intermediate paper layer lying between the individual plates. See col. 3, lns. 33 to 53. Angelbeck further teaches that once the plates have been isolated and the blowing air has been shut off, the next plate may be removed by a suction plate. See col. 3, lns. 53-58. Angelbeck does not teach or suggest using *pulses* of gas, much less pulses of gas to blow the slip sheet into a discarded slip sheet area. Rather, Angelbeck teaches a continuous air stream. Thus, claim 1, and claims 2 to 6 and 10 to 11 which depend therefrom, are allowable over the combination of Hillhouse and Angelbeck et al. Independent claims 12 and 28 have a similar limitation, so these claims and claims 13 and 29 to 30 which depend therefrom, are similarly allowable.

The Examiner rejected claims 1, 7 to 8 and 12 [sic, 14?] as being allegedly unpatentable over Hillhouse in view of Schön et al. (US 4,402,592). As noted above, independent claim 1 has been amended to recite a method of “directing *pulses* of gas at the slip sheet to blow the slip sheet into a discarded slip sheet area” (emphasis added). Also as noted above, Hillhouse does not teach the step of directing pulses of gas at a slip sheet. Schön teaches an air stream “almost tangentially directed to the underside of the printing plate” which detaches the sheet from the plate. See col. 5, lns. 27 to 32. Schön, however, does not teach or suggest using gas to blow the slip sheet into a discard area, and neither Hillhouse nor Schön teach or suggest using pulses of gas for any purpose. Thus, claim 1, and claims 7 to 8 which depend therefrom, are allowable over the combination of Hillhouse and Schön et al. Independent claim 12 has a similar limitation, so this claim and claim 14 which depends therefrom, are similarly allowable.

The Examiner has rejected claims 1 and 9 as being allegedly unpatentable over Hillhouse in view of Straayer et al. (US 5,818,508). Again as noted above, independent claim 1 has been amended to recite a method of “directing pulses of gas at the slip sheet to blow the slip sheet into a discarded slip sheet area” and Hillhouse does not teach the step of directing pulses of gas at a slip sheet. Straayer teaches that a “controller activates [a] compressed air source to deliver pulses of compressed air to the spaced groups of nozzles. . . .” See col. 8, lns. 62 to 65. Straayer further teaches, however, that “controlling

the strength of the air pulses and the direction of flow provided by the nozzles is critical.” Straayer notes that the pulses must not be so strong so as to pin the interleaf to the bottom surface of the sheet. See col. 10, lns.3 to 12. Further, once the sheet has been removed, the interleaf is picked up by a vacuum mechanism which transports the interleaf to an interleaf discharge means. See col. 9, lns. 59 to 67 and col. 10, lns. 1 to 13. Thus, while using pulses of gas to separate a sheet from an interleaf, Straayer fails to use pulses of gas to move the interleaf to a discard location. Straayer not only fails to teach or suggest using pulses of gas to blow slip sheets into a discarded slip sheet area, but also teaches away from this purpose by stressing that controlling the strength of the pulses is critical and using alternate means to move its interleafs. Thus, claim 1, and claim 9 which depends therefrom, are allowable over the combination of Hillhouse and Straayer et al.

The Examiner has rejected, as being allegedly unpatentable, claim 31 over Hillhouse in view of Angelbeck et al. and Walter et al. (US 5,209,809), claims 15, 19 and 21 to 25 over Ono et al. (US App. 09/775592) in view of Schön et al., claims 15 and 23 over Ono et al. in view of Angelbeck et al., claims 16 to 17 over Ono et al. in view of Schön et al., claim 18 over Ono et al. in view of Schön et al. and Blake et al. and claim 20 over Ono et al. in view of Schön et al. and Hillhouse. As discussed above, independent claims 12 has been amended to recite an apparatus that “directs pulses of gas at the slip sheet to blow the slip sheet into a discarded slip sheet area.” Independent claim 28 has a similar limitation. Also as discussed above, none of the references cited to allege obviousness of the independent claims 1, 12 and 28 teach or suggest this limitation. Thus, dependent claims 15 to 25 and 31 are all allowable over the cited art.

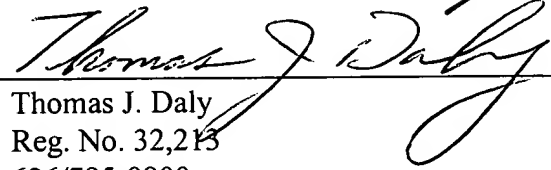
For the reasons set forth above, claims 1 to 35 are allowable over the references of record. Applicants request that the Examiner reconsider the bases for refusal and issue a Notice of Allowance for pending claims 1 to 35. However, if there are any remaining issues which can best be addressed by telephone, the Examiner may contact Applicants’ counsel at the number below.

Application No. 09/882,154

Respectfully submitted,

CHRISTIE, PARKER & HALE, LLP

By

A handwritten signature in cursive script, reading "Thomas J. Daly", is written over a horizontal line. The signature is fluid and extends slightly above and below the line.

Thomas J. Daly
Reg. No. 32,213
626/795-9900

TJD/OSB/edb

VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the claims:

Please amend claims 1 to 12, 15, 17 to 20, 26 and 28 as follows:

1. (Amended) A method for separating a slip sheet from a plate comprising:
directing gas at the plate interface with the slip sheet to create a layer of gas between the plate and the slip sheet; and
directing pulses of gas at the slip sheet to blow the slip sheet into a discarded slip sheet area.
2. (Amended) A [~~slip sheet removal system~~] method according to claim 1 wherein the slip sheet is stored in a discarded slip sheet holding area.
3. (Amended) A [~~slip sheet removal system~~] method according to claim 1 wherein the gas directed at the plate is supplied by nozzles.
4. (Amended) A [~~slip sheet removal system~~] method according to claim 1 wherein the gas is air.
5. (Amended) A [~~slip sheet removal system~~] method according to claim 1 wherein the gas is at a pressure suitable for removing slip sheets and injecting air between slip sheets and plates.
6. (Amended) A [~~slip sheet removal system~~] method according to claim 1 wherein the gas is at 80 psi.
7. (Amended) A [~~slip sheet removal system~~] method according to claim [±] 3 wherein the gas nozzles directing gas at the plate interface with the slip sheet comprise jet nozzles.
8. (Amended) A [~~slip sheet removal system~~] method according to claim 1 wherein the gas nozzles directing gas at the slip sheet comprise jet nozzles.

9. (Amended) A [~~slip sheet removal system~~] method according to claim 1 wherein the gas is pulsed.

10. (Amended) A [~~slip sheet removal system~~] method according to claim [†] 2 wherein the slip sheet is guided to the holding area by a slip sheet chute.

11. (Amended) A [~~slip sheet removal system~~] method according to claim 10 wherein a top plate of the chute has an angled front edge which further guides the slip sheet into the holding area.

12. (Amended) An apparatus for separating a slip sheet from a plate comprising:
at least one gas nozzle that directs gas at the plate interface with the slip sheet to create a layer of gas between the plate and the slip sheet and directs pulses of gas at the slip sheet to blow the slip sheet into a discarded slip sheet area.

15. (Amended) An apparatus for separating slip sheets from plates comprising:
a cart comprising a plate handler area to hold at least one stack of plates interleaved with slip sheets and a discarded slip sheet holding bin;
a movable head comprising at least one vacuum cup to acquire plates one at a time from the cart;
and at least one gas nozzle to create a layer of gas between the plates and the slip sheets and to deliver pulses of gas to blow the slip sheets into the holding bin.

17. (Amended) An apparatus according to claim 15 wherein [~~the~~] front end corners of the plate handler area are squared to define an area for the plates to rest.

18. (Amended) An apparatus according to claim [†5] 17 where the front end corners are squared and then taper outward to allow the slip sheets to pass through more easily.

19. (Amended) An apparatus according to claim 15 wherein the plate handler area is separated from the discarded slip sheet holding bin by a plate which acts ~~[at the]~~ as a base of the handler area and ~~[the]~~ a top of the holding bin.

20. (Amended) An apparatus according to claim 15 wherein ~~[the]~~ a bottom front end of the cart is slanted at an outward angle to prevent discarded slip sheets from piling up at the front of the cart.

26. (Amended) An apparatus ~~[according to claim 25]~~ for separating slip sheets from plates comprising:

a cart comprising a plate handler area to hold at least one stack of plates interleaved with slip sheets and a discarded slip sheet holding bin;

a movable head comprising at least one vacuum cup to acquire plates one at a time from the cart;

and at least one gas nozzle to create a layer of gas between the plates and the slip sheets and to blow the slip sheets into the holding bin wherein the head comprises a chute and a ~~[the]~~ top of the chute comprises a baffle.

28. (Amended) An apparatus for separating slip sheets from plates comprising:
means for handling plates,
means for holding discarded slip sheets,
and means using pulses of gas for directing slip sheets from a handling area to the means for holding.